

Amendments to the Claims

This listing of claims will replace all prior versions, and listings, of the claims in the application.

Listing of Claims

1. (currently amended) A method of identifying a microorganism comprising the steps of:
 - a) obtaining a test sample of an unknown microorganism;
 - b) adding a mediator or mediator mixture to the test sample in the presence of an effector; effector, wherein the mediator or mediator mixture comprises ferricyanide, dichlorophenol-indophenol (DCIP), ferrocene and ferrocene derivatives, methylene blue, Janus green, tris(bipyridyl)iron(III), a quinone, a phenazine or combinations thereof.
 - c) assessing variation in respiration rate of the microorganism using electrochemical measurements over a pre-determined time period; and
 - d) comparing the variation in the respiration rate of the microorganism with the variation in respiration rates of known microorganisms exposed to the effector, thereby identifying the unknown microorganism in the test sample.
2. (original) The method of claim 1 wherein the step of adding a mediator or mediator mixture to the test sample comprises combining the test sample with a solution of the effector for a fixed time prior to adding the mediator.
3. (cancelled)
4. (cancelled)
5. (currently amended) The method of claim 4-claim 1 wherein the quinone is benzoquinone, naphthoquinone, menadione, anthraquinone, or substituted derivatives of these.
6. (currently amended) The method of claim 4-claim 1 wherein the phenazine is phenazine methosulfate or phenazine ethosulfate.

7. (cancelled)
8. (currently amended) The method of claim 7-claim 1 wherein the electrochemical measurements are biampерometric or coulometric.
9. (currently amended) The method of claim 7-claim 1 wherein the respiration rate of the unknown microorganism and the known microorganism are assessed by the electrochemical measurement of mediator consumption.
10. (original) The method of claim 1 wherein the pre-determined time period is up to 15 minutes.
11. (original) The method of claim 1 wherein the unknown microorganism is in an arrested growth state.
12. (original) The method of claim 1 wherein a plurality of effectors are separately employed to assess variations in respiration rate.
13. (original) The method of claim 12 wherein said effector is selected from the group consisting of succinate, D-xylose, D-lactose, ornithine, alpha-ketoglutarate, beta-glycerophosphate, D-fructose, sucrose, L-lysine, lactic acid, L-arginine, D-sorbitol, formic acid, L-tryptophan, D-galactose, L-rhamnose, D-arabinose, pyruvic acid, citric acid, malonic acid, D-mannose, beta-cyclodextrin, nitrate and glucose.
14. to 22. (cancelled)